



European Road Safety Observatory

Facts and Figures - Pedestrians - 2020

This document is part of a series of 18 *Facts and Figures* reports. The purpose of these *Facts and Figures* reports is to provide recent statistics related to a specific road safety topic, for example a specific age group or transport mode. The *Facts and Figures* reports replace the Basic Fact Sheets series that were available until 2018 (containing data up to 2016). The most recent figures in this *Facts and Figures* report of 2020 refer to 2018.

The topic "*Pedestrians*" is also addressed in the "*Road Safety Thematic Report Pedestrians*", presenting an overview of the most important research questions and results on this topic.

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Sources	Information in this document is based largely on data in the CARE database (Community database on Accidents on the Roads in Europe). Other data are taken from Eurostat. Date of extraction: 27 th December, 2020

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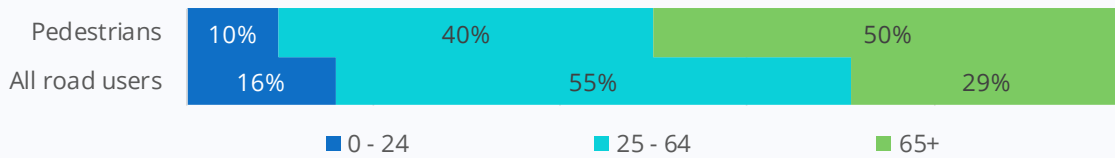
1 Key Facts

Pedestrian Fatalities 2018

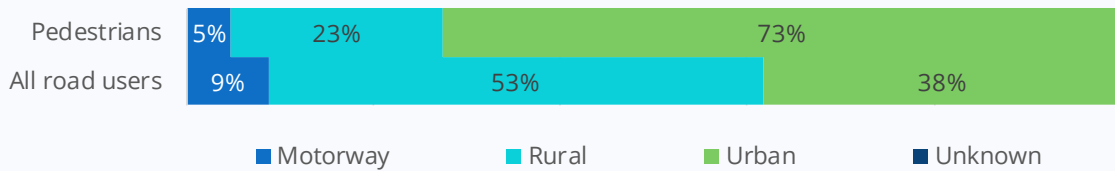


- 4763 fatalities
- 20% of all road fatalities

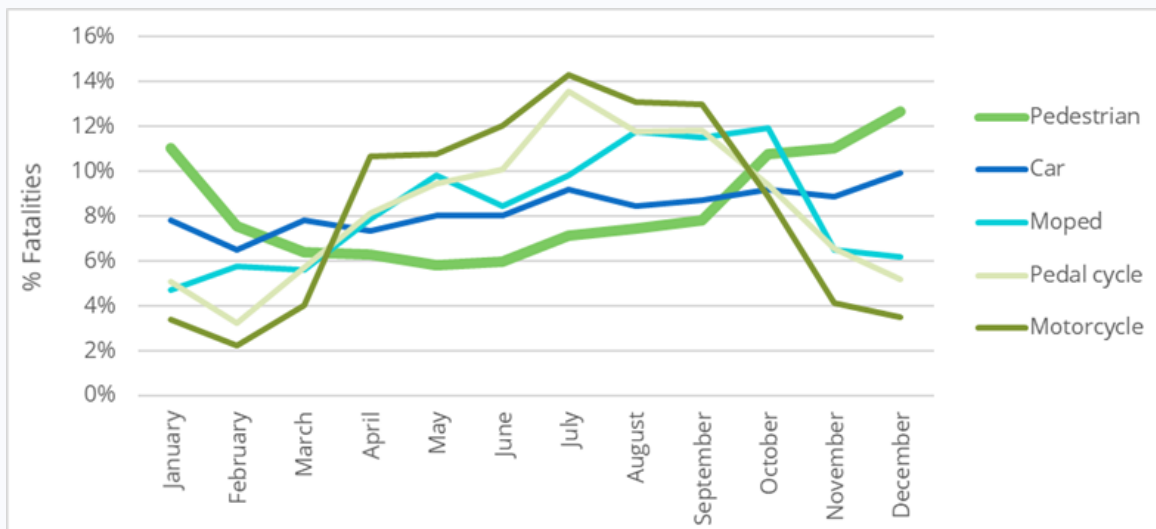
Age category



Road type



Monthly distribution of fatalities by transport mode



Pedestrians are a special category within the totality of different transport modes. It is the most universal form of movement, the only mode of transport without a vehicle, and the first form of movement that each person learns. Like bicycles, this mode of transport has no age limit, is often practised by children and senior citizens (cf. Thematic Report on Pedestrians), and is beneficial for health and the environment. At the same time, pedestrians are **particularly vulnerable**. Usually they do not wear protective clothing and, compared to other transport modes, they have a low and vulnerable position on the road. **As a consequence, almost all fatalities in pedestrian crashes (98%) are the pedestrians themselves.**

One in five of all road fatalities across the EU are pedestrians. This proportion is higher than for other vulnerable road users, namely 9% for cyclists, 3% for mopeds and 15% for motorcycles. Although the absolute number of pedestrian fatalities fell from 5,952 to 4,763 fatalities between 2010 and 2018 (-20%), the total number of road fatalities decreased to the same extent (-21%), keeping the proportion of pedestrians in the total number of road fatalities constant.

Split by country, the largest decrease in pedestrian fatalities occurred in Poland, although it still has the highest number of pedestrian fatalities in 2018. Both the share of pedestrian fatalities in the total number of road fatalities and pedestrian mortality are highest in the **central and eastern EU Member States**.

No fewer than 1 in 2 pedestrian fatalities (50%) in 2018 are seniors aged 65 or older. This is much higher than the proportion of seniors within the total number of road fatalities (29%) and their share in the population (20%). As a consequence, **the mortality rate among senior pedestrians is very high:** 3 times higher than for 25-64 year olds and even 7 times higher than for the under-25s. The proportion of women in pedestrian fatalities is 37%, which is higher than their share in the total number of road fatalities (24%).

Regarding the time and location of pedestrian fatalities, we see a more pronounced morning and evening peak than for all road fatalities. Furthermore, the monthly distribution is very different from other road user types, **with up to two times more pedestrians getting killed on the road in the winter months than during the months of March to June.** Compared to all road fatalities combined, many more pedestrians are killed on urban roads (73% versus 38% in 2018). However, motorways also account for 5% of pedestrians killed.

Basic definition

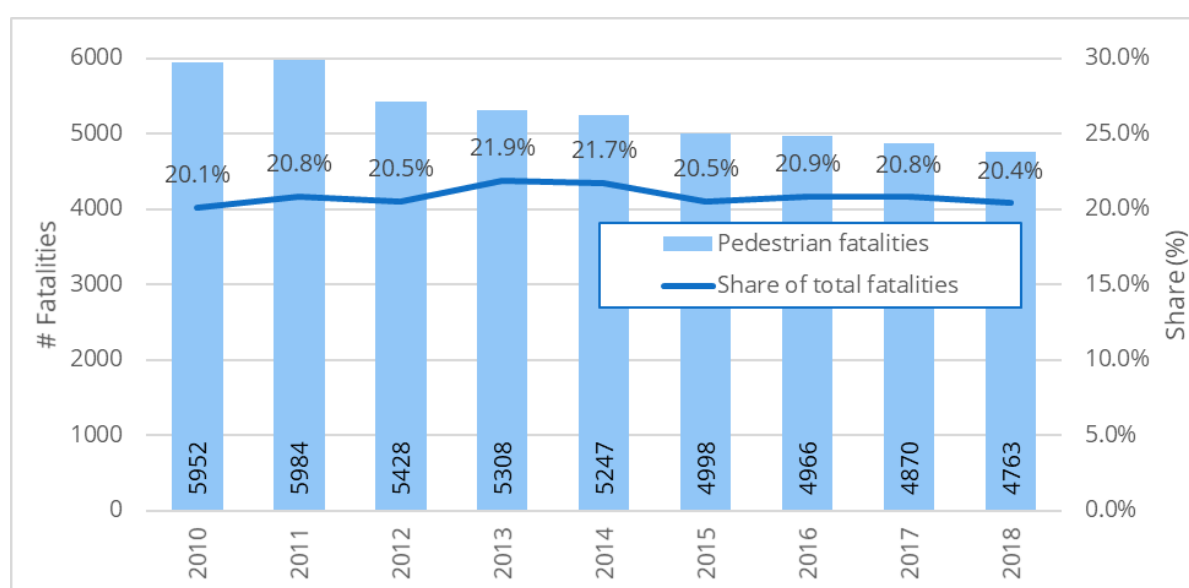
Person on foot. Included are occupants or persons pushing or pulling a child's carriage, an invalid chair, or any other small vehicle without an engine. Also included are persons pushing a cycle, moped, roller-skating, skateboarding, skiing or using similar devices. Does not include persons in the act of boarding or alighting from a vehicle. (Source: UNECE/ITF/Eurostat Glossary and CADAS Glossary) Unilateral pedestrian crashes (e.g. pedestrian falls) are excluded.

2 Main trends

2.1 Fatalities

The number of pedestrian fatalities fell from 5952 to 4,763 fatalities between 2010 and 2018. This is a relative **decrease of 20%**, which is almost equal to the decrease in all road fatalities together in the same period (- 21%). As a result, the proportion of pedestrians has remained almost constant in recent years: **1 in 5 road fatalities in the EU are pedestrians**.

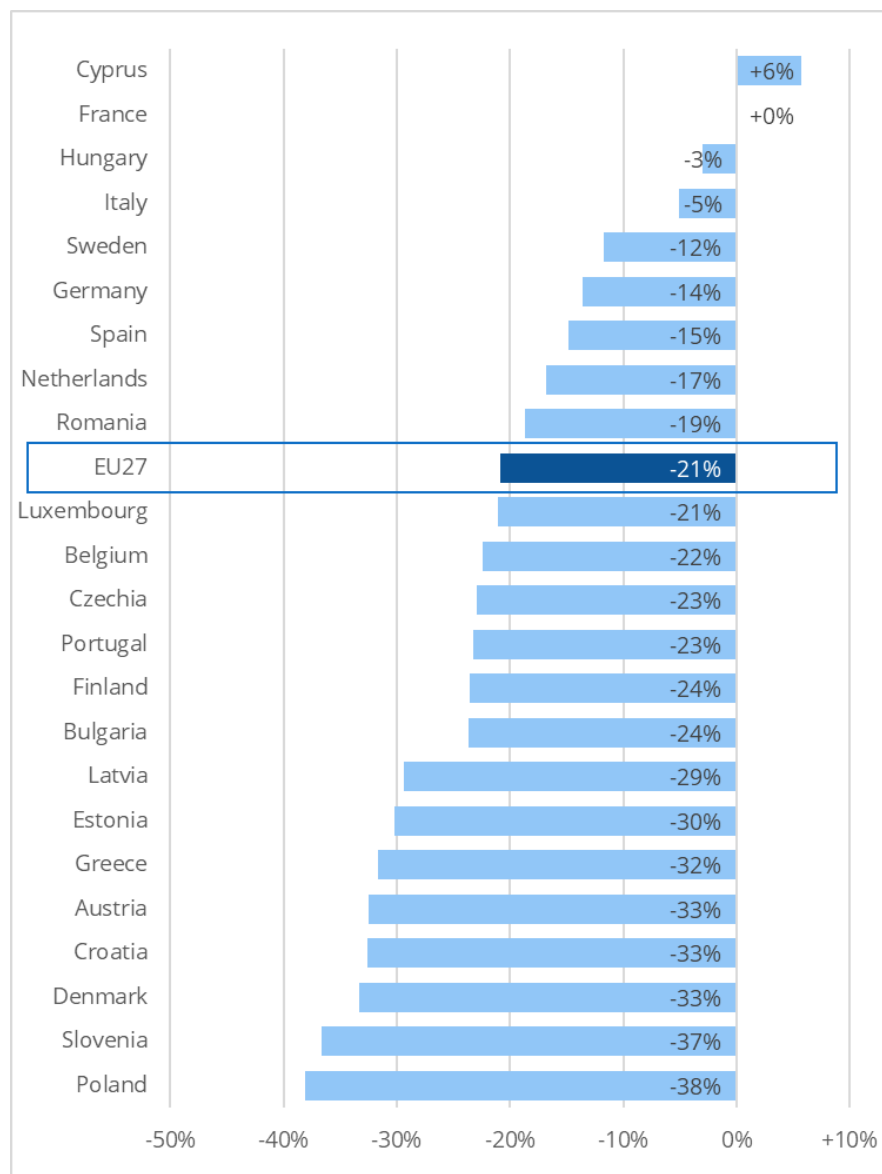
Figure 1. Annual number of pedestrian fatalities, and their share in the total number of fatalities in the EU27 (2010-2018). Source: CARE



Note: imputation (explained in “Notes”) was used for missing values for specific combinations of years and countries.

In almost all countries of the EU, the number of pedestrian fatalities has decreased over the past decade. This is not the case in Cyprus (a country with few pedestrian fatalities and large annual random fluctuations) and France. Poland shows the strongest decline (- 38%). **Despite the strong decline in Poland, this country has the highest number of pedestrian fatalities in 2018 (803), followed by Romania (690) and Italy (612).**

Figure 2. Percentage change in the number of pedestrian fatalities per country in the EU27 (2016-2018 versus 2009-2011). Source: CARE



Notes:

- Imputation was used to compute the trend for EU27.
- Countries that are not included in the Figure are Ireland, Lithuania, Malta and Slovakia because these countries have missing values in the time series 2009-2018.

Table 1. Number and trend of pedestrian fatalities per country in the EU27, EFTA and UK (2010; 2016-2018).
Source: CARE

	2010	2016	2017	2018	Trend (2016-2018 VS 2009-2011) (%)	Miniplot trend since 2010
Austria	98	73	73	47	-33%	
Belgium	108	81	95	74	-22%	
Bulgaria	174	118	157	123	-24%	
Croatia	105	67	56	65	-33%	
Cyprus	13	14	15	8	+6%	
Czechia	168	130	129	142	-23%	
Denmark	44	36	20	30	-33%	
Estonia	14	22	10	12	-30%	
Finland	35	29	27	25	-24%	
France	485	553	480	468	+0%	
Germany	476	500	489	464	-14%	
Greece	179	149	118	146	-32%	
Hungary	192	152	170	165	-3%	
Ireland	44	35	NA	NA	/	
Italy	621	570	600	612	-5%	
Latvia	79	55	51	50	-29%	
Lithuania	NA	NA	NA	NA	/	
Luxembourg	1	8	4	3	-21%	
Malta	NA	8	7	2	/	
Netherlands	62	44	64	50	-17%	
Poland	1236	868	873	803	-38%	
Portugal	195	123	130	163	-23%	
Romania	868	717	733	690	-19%	
Slovakia	126	80	55	72	/	
Slovenia	26	22	10	13	-37%	
Spain	471	389	351	386	-15%	
Sweden	31	42	37	34	-12%	
Total EU27	5952	4966	4870	4763	-21%	
Iceland	2	2	0	0	/	
Norway	24	15	11	NA	/	
Switzerland	75	50	47	43	-31%	
United Kingdom	415	463	485	472	+1%	

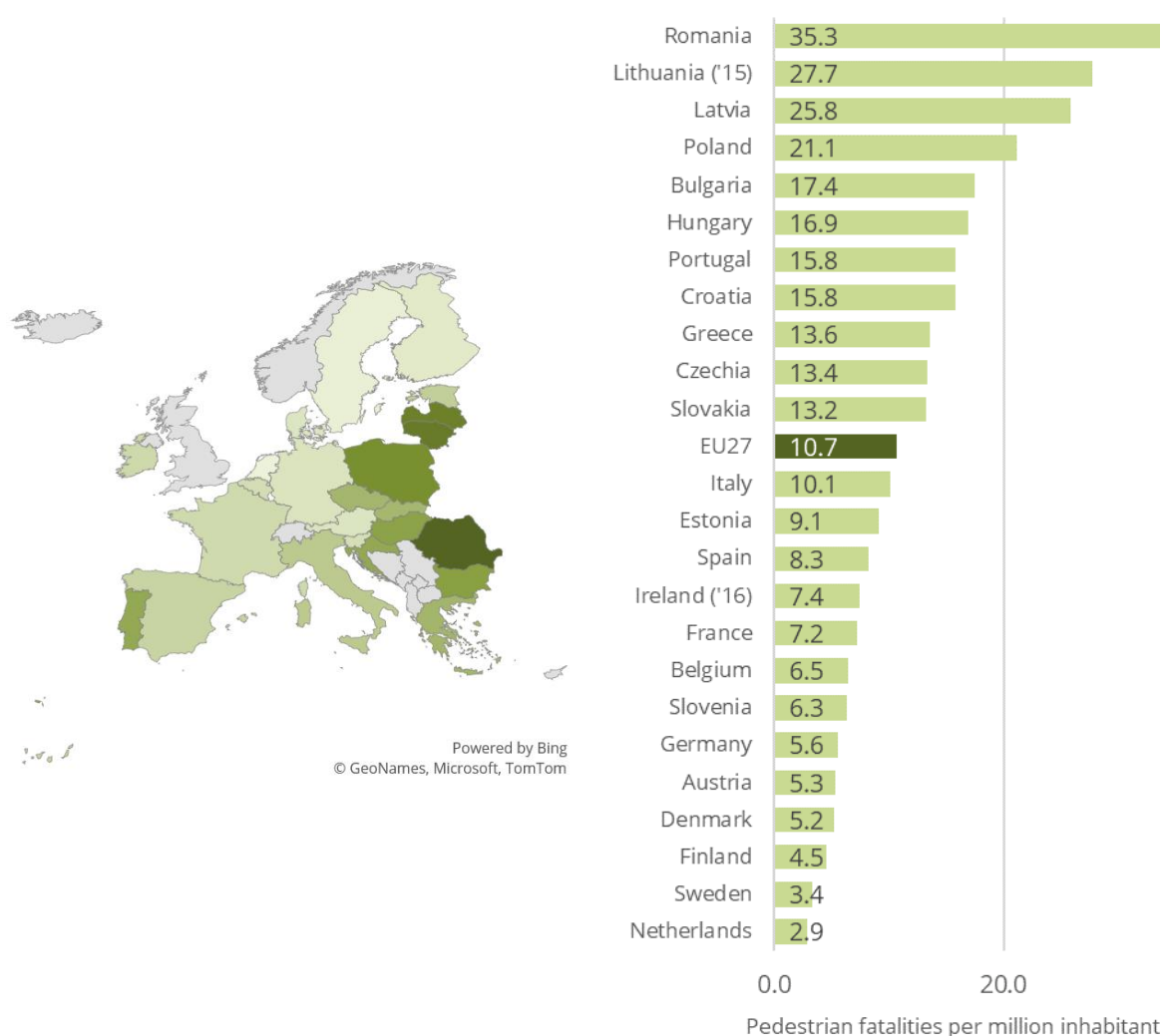
Notes:

- Imputation was used to compute the trend for EU27.
- For countries with missing values, no or less information is included about trends.
- Due to small absolute numbers, no trend percentage is given for Iceland.

2.2 Mortality : number of pedestrian fatalities per million inhabitants

The number of pedestrian fatalities per million inhabitants is highest in the central and eastern European Member States of the EU. In Romania, Lithuania, Latvia, and Poland, the mortality rate for pedestrians in 2018 is at least 2 times higher than the EU average. Despite the fact that Poland shows the strongest decrease in the past decade, the country still has above-average pedestrian mortality. In the south of the EU, Portugal and Greece show above-average figures.

Figure 3. Pedestrian fatalities per million inhabitants per country in the EU27 (2018). Sources: CARE & EURO-STAT



Notes:

- Imputation was used to compute the overall mortality for EU27.
- With the exception of Lithuania (2015) and Ireland (2016), data for 2018 were used.
- Due to small numbers of fatalities, Cyprus, Malta and Luxembourg are not included.

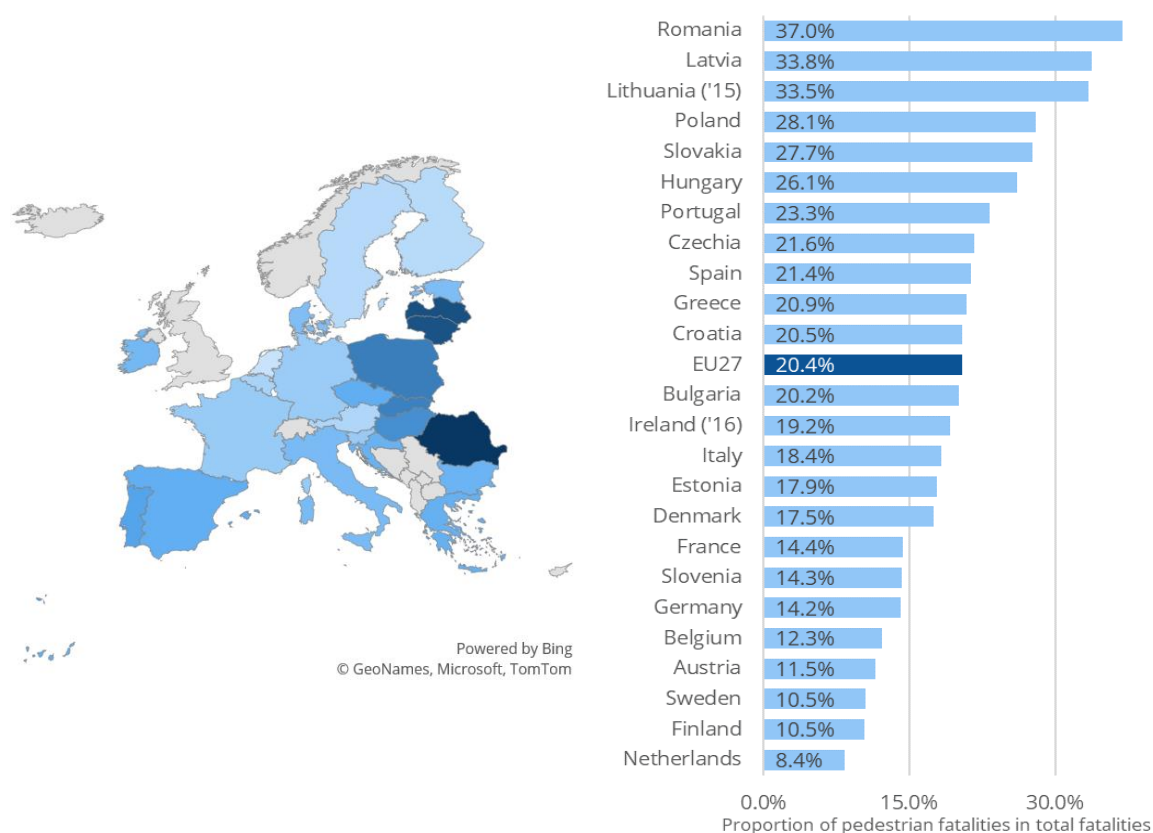
2.3 Proportion of fatalities : number of pedestrian fatalities in the total number of road fatalities

Mortality is an important indicator, but does not take into account differences in the general state of road safety in countries. In other words, it is possible that pedestrian mortality is high because the total mortality for all road users is high. Therefore, it is important to also look at the proportion of pedestrian fatalities within the total number of road fatalities. The proportion rate shows the relative incidence of pedestrian fatalities for a specific country.

The Figure below on proportion rate is in line with the Figure on mortality. **Central Eastern EU Member States score worst on road safety for pedestrians.** Romania, Latvia, Lithuania and Poland again have the highest scores, as they do for mortality. And also Greece and Portugal score above average in terms of the proportion rate. The high position of some countries may be related to the nature of pedestrian mobility in these countries. Unfortunately exposure data on pedestrians, such as the number of trips and the average distance travelled, are either missing or incomplete for most EU countries. On average, across the EU, 15 to 25% of all trips are made on foot according to the Thematic report Pedestrians.

Figure 4. Number of pedestrian fatalities in the total number of fatalities, per country in the EU27 (2018).

Source: CARE



Notes:

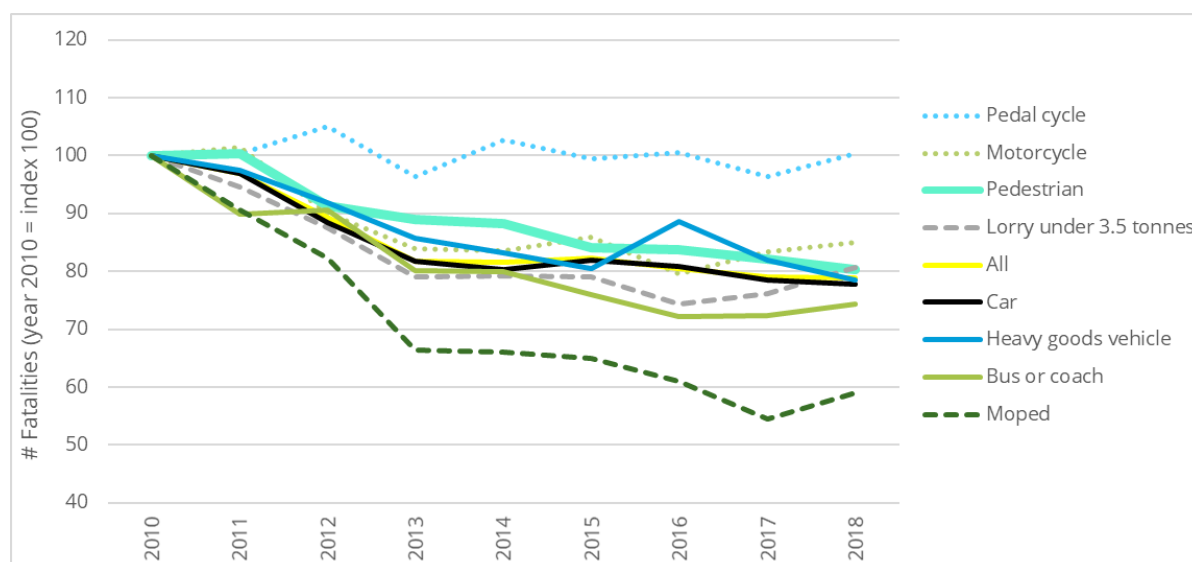
- Imputation was used to compute the overall proportion for EU27.
- With the exception of Lithuania (2015) and Ireland (2016), data for 2018 were used.
- Due to small numbers of fatalities, Cyprus, Malta and Luxembourg are not included.

2.4 Comparison of pedestrians with other transport modes

The Figure below shows the total number of fatalities in road crashes involving particular modes of transport over the period 2010-2018. Not only are fatalities by transport mode counted, but also the other party killed in the crash by respective mode of transport (e.g. in car crashes, both the car occupants and the other parties killed are counted).

The Figure below shows that the number of fatalities in pedestrian crashes has decreased to the same extent as the total number of fatalities. Compared to other vulnerable road users, **the trend is worse for pedestrians than for mopeds but better than for motorcyclists and for cyclists.**

Figure 5. Trend of fatalities in crashes involving pedestrians and other transport modes in the EU27 (2010-2018). Source: CARE



Note: imputation was used for missing values for specific combinations of years and countries. Countries that show an unreliable trend for a particular mode of transport are omitted for that mode of transport.

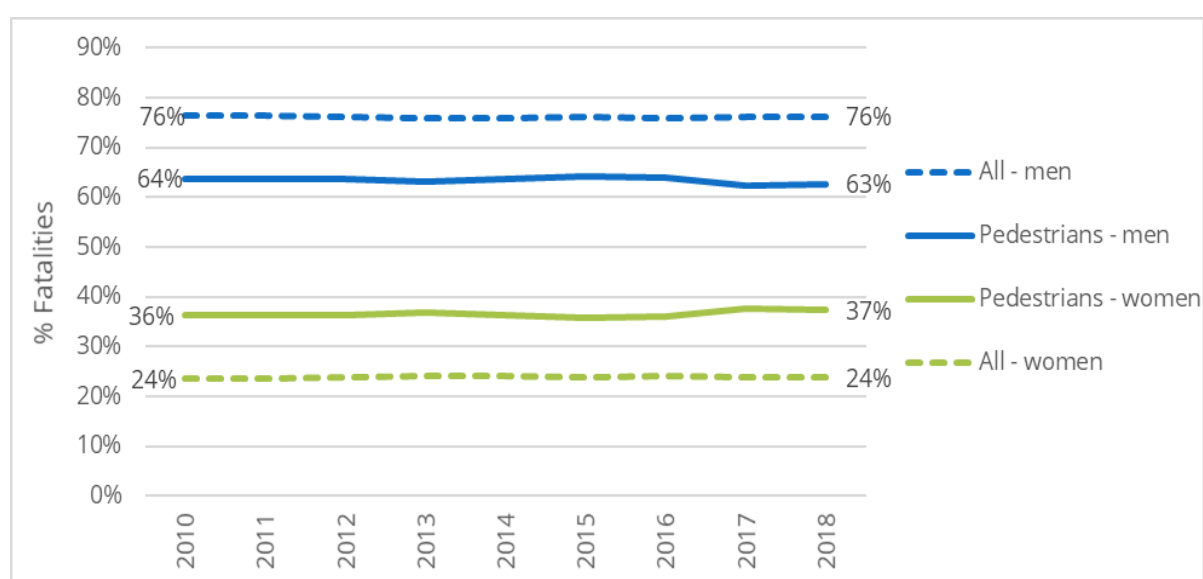
3 Road user

3.1 Gender

76% of all road fatalities in the EU are male. At 63%, the proportion of men among pedestrian fatalities is lower. Both shares have remained more or less stable since 2010.

Implicitly, it can be deduced from the two preceding percentages that the proportion of fatalities who are pedestrians is higher among women than among men: 32% of road fatalities in women are pedestrians compared to 17% in men in 2018.

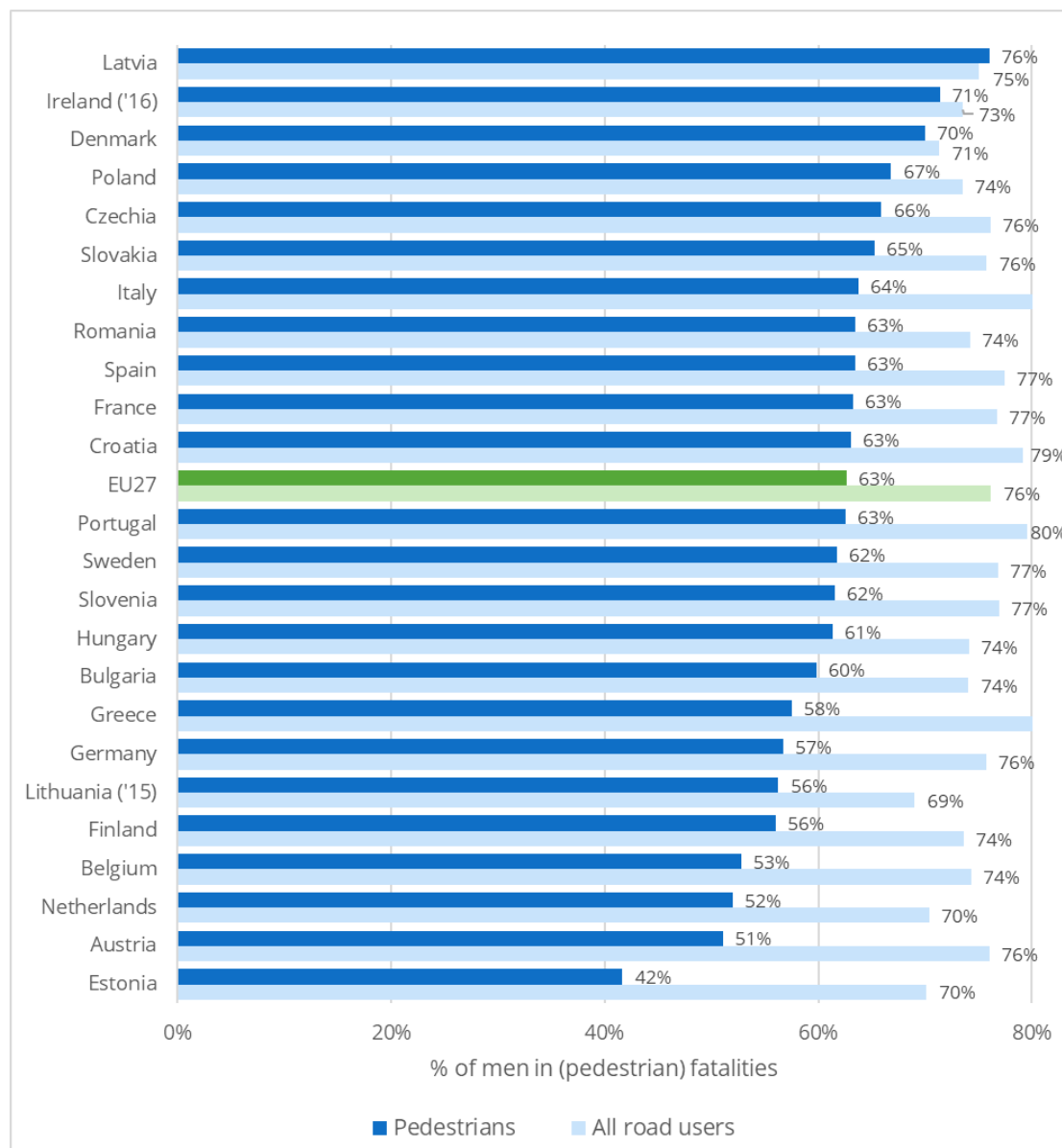
Figure 6. Distribution of pedestrian fatalities and all fatalities by gender in the EU27 (2010-2018). Source: CARE



Note: the relative share of pedestrian fatalities with gender "unknown" is 0.3% in 2018. Therefore, the category "unknown" is omitted from the Figure.

In some EU countries, the proportion of men among pedestrian fatalities is higher in 2018 (e.g. Latvia, Ireland, Denmark); in other countries it is lower (e.g. Estonia, Austria, Netherlands, Belgium). There is no geographical region in the EU that really stands out in terms of the proportion of men among pedestrian fatalities.

Figure 7. Share of men among pedestrian fatalities and among all fatalities per country in the EU27 (2018).
Source: CARE



Notes:

- The relative share of pedestrian fatalities with gender "unknown" is 0.3% in 2018. Therefore, the category "unknown" is omitted from the Figure.
- Due to small numbers of fatalities, Cyprus, Malta and Luxembourg are not included.

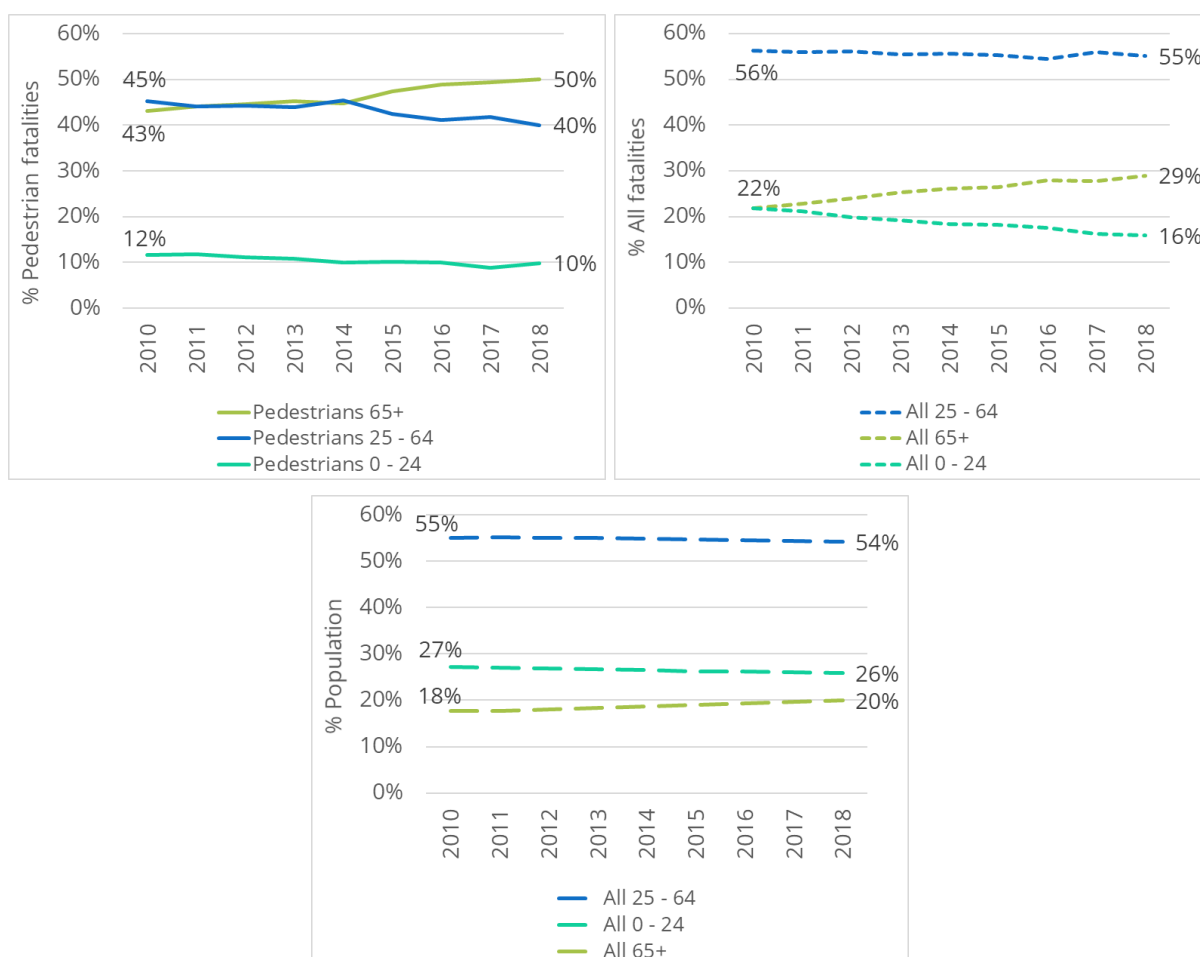
3.2 Age

The Figure below shows an increase of the over-65s within the group of pedestrian fatalities. In 2018, **1 in 2 pedestrian fatalities was a person aged 65 or older**. The proportion of seniors within total road fatalities also increased, but at 29% in 2018 it is not yet as high as the proportion of pedestrians that are over-65. People younger than 25 years have a lower share in the number of pedestrian fatalities (10% in 2018) than in the total number of road fatalities (16% in 2018).

Taking into account their share in the population, seniors are substantially over-represented in pedestrian fatalities while 0-24 year olds are substantially under-represented.

Although children (0-15) only account for a small share of pedestrian fatalities (4%) the proportion of pedestrians among children is 35% which is due to the relatively low number of total road fatalities in this age group compared to other age groups (cf. Thematic Report on Pedestrians).

Figure 8. Distribution of pedestrian fatalities and all fatalities by age group in the EU27 (2010-2018). Source: CARE & Eurostat



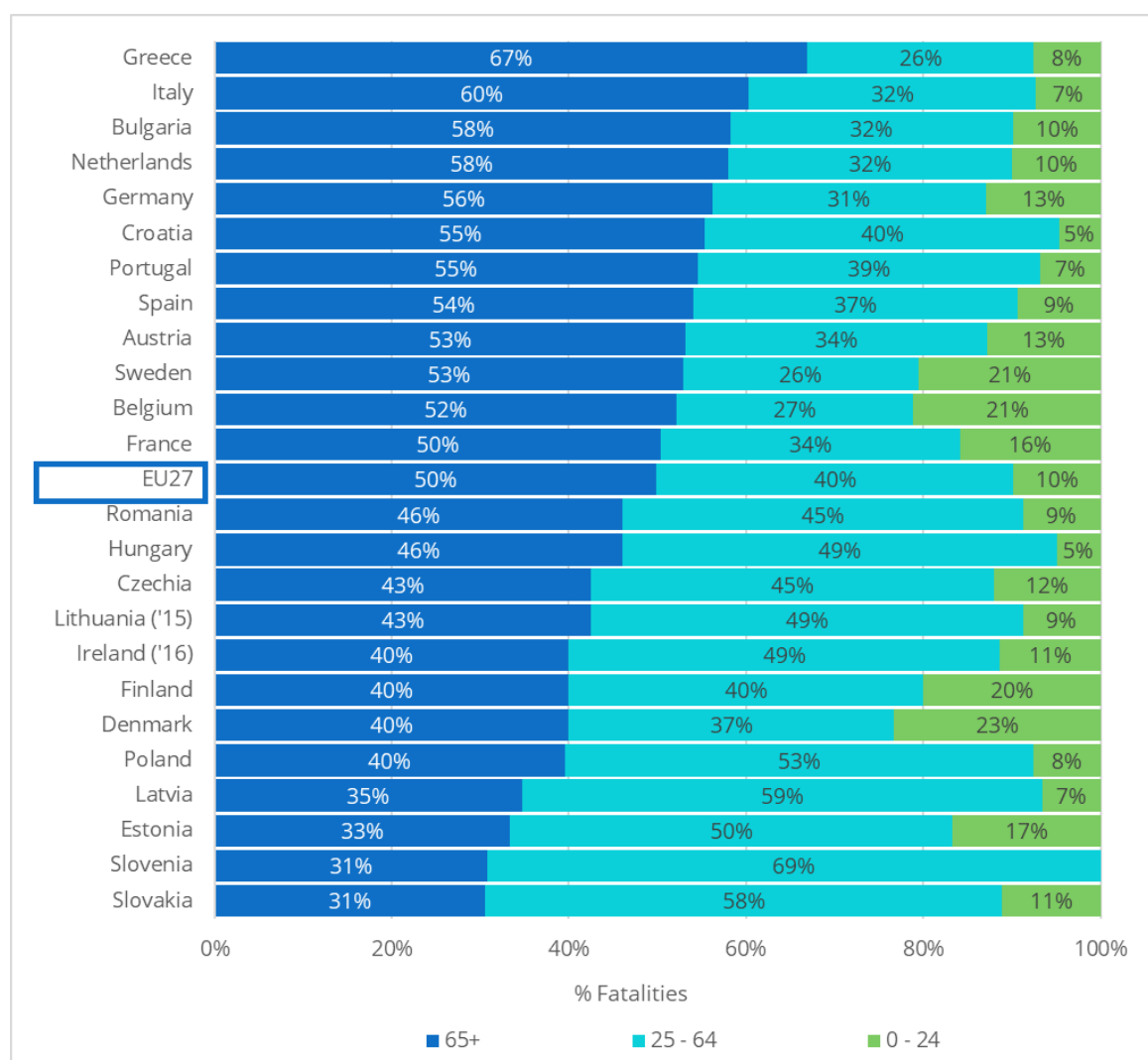
Note: the relative share of pedestrian fatalities with age "unknown" is 0.7% in 2018. Therefore, the category "unknown" is omitted from the Figure.

Especially in some countries in the south of the EU, a high proportion of seniors among pedestrian fatalities is observed, such as Greece, Italy, Croatia, Portugal, and Spain.

Compared to other countries, we see a high number of under-25s among the pedestrians killed in the Nordic EU countries, Denmark, Sweden and Finland.

The relative proportion of seniors amongst pedestrian fatalities is already very high at 50%, but if we relate the number of pedestrian fatalities by age group to the number of persons by age group (i.e. mortality), the situation for seniors appears even more pronounced. **The mortality of the over-65s is 3 times higher than among 25-64 year olds and even 7 times higher than among the under-25s.** The excel file "F&F Pedestrians" contains more information and figures on this.

Figure 9. Distribution of pedestrian fatalities by age group per country in the EU27 (2018). Source: CARE



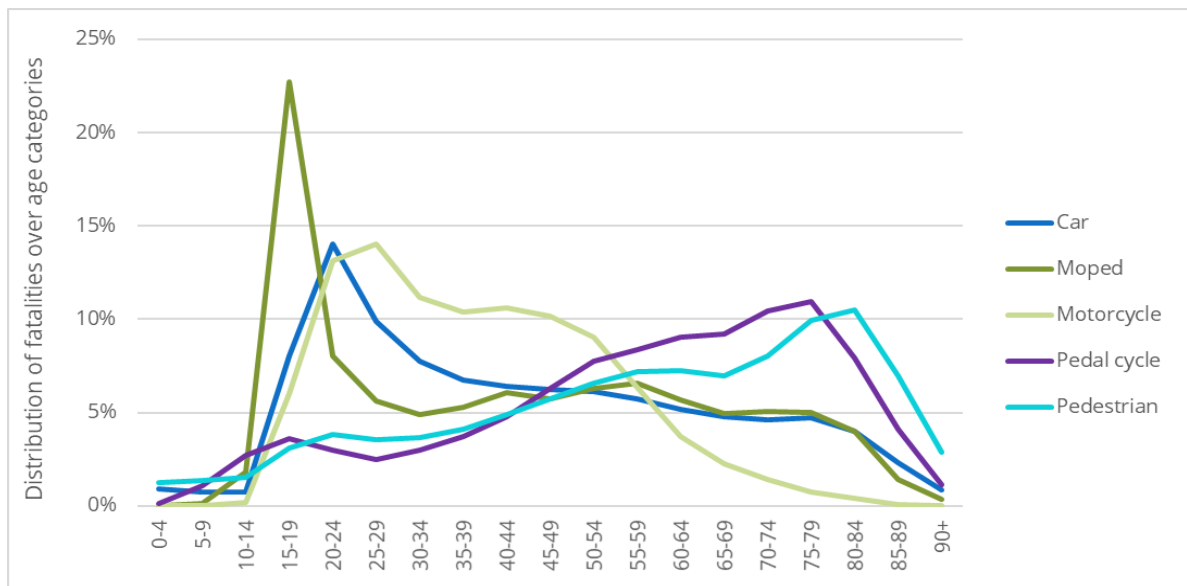
Notes:

- The relative share of pedestrian fatalities with age "unknown" is 0.7% in 2018. Therefore, the category "unknown" is omitted from the Figure.
- Due to small numbers of fatalities, Cyprus, Malta and Luxembourg are not included.

The Figure below provides a more detailed overview of the distribution of pedestrian fatalities by age. **Between the age category 0-4 years and the age category 80-84 years, the number of pedestrian fatalities continues to increase** steadily almost without interruption. We see a very similar distribution for cyclists. For motorized vehicles we see a

very different spread with a clear peak at the youngest age category at which the vehicle can be used.

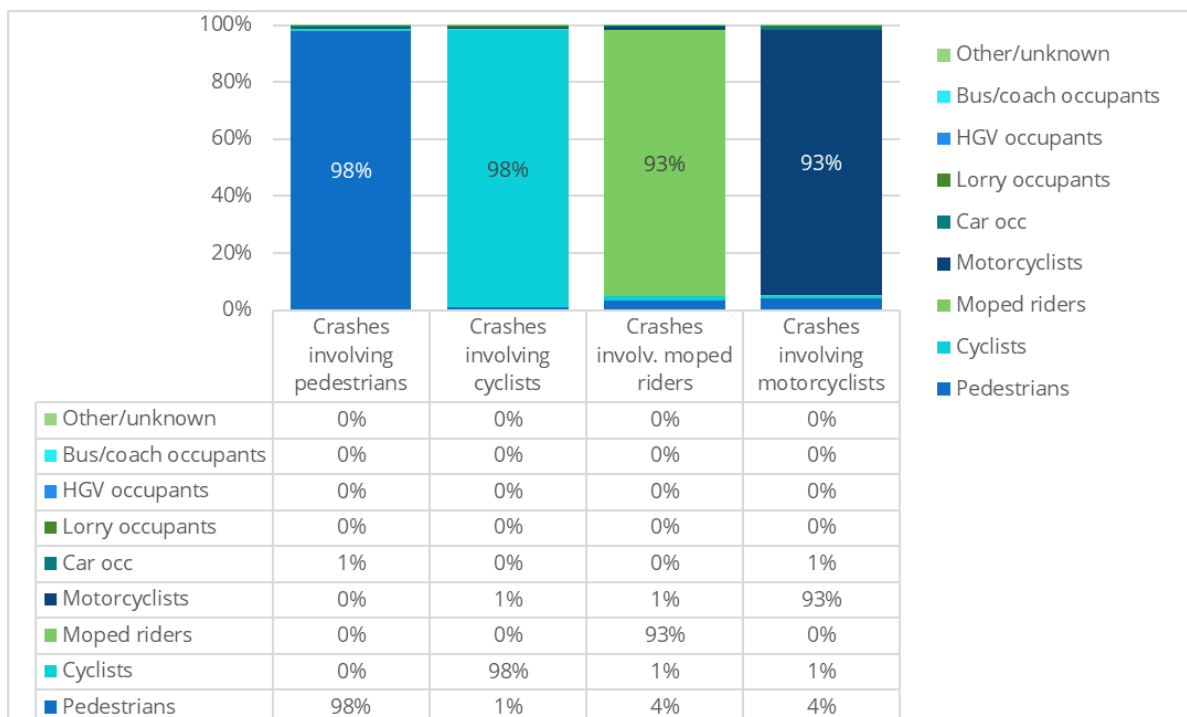
Figure 10. Distribution of fatalities over 5-year age categories, by transport mode, in the EU27 (2010-2018). Source: CARE



3.3 Other transport modes involved

The fatalities in crashes involving pedestrians are virtually always the pedestrians themselves (98%). Also in crashes involving other vulnerable road users than pedestrians, 9 out of 10 fatalities are the vulnerable road users themselves.

Figure 11. Distribution of fatalities by transport mode in crashes involving pedestrians, cyclists, moped riders and motorcyclists in the EU27 (2018). Source: CARE

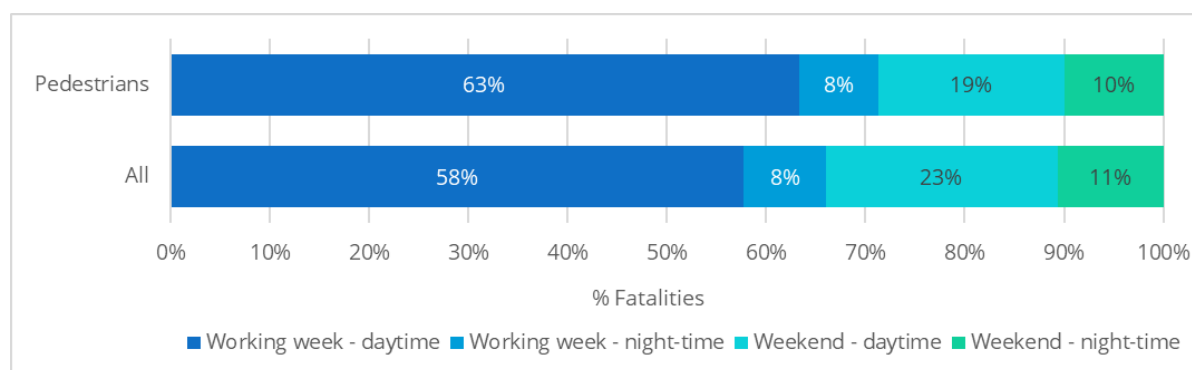


4 Time

4.1 Period of the week

Compared to all fatalities combined, pedestrian fatalities occur more often at daytime during the working week but less often at daytime during the weekend. The proportion of pedestrian fatalities during night-time (from 10 p.m. to 5.59 a.m.) amounts to 18% which is very similar to the proportion all fatalities combined during night-time (19%).

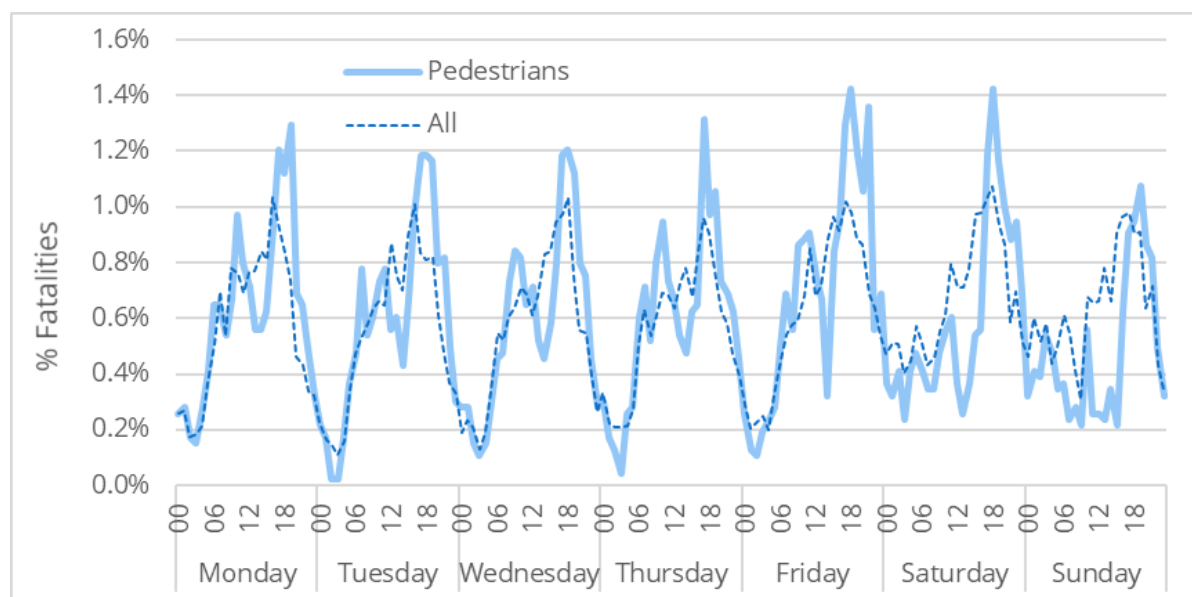
Figure 12. Distribution of pedestrian fatalities and all fatalities according to period of the week in the EU27 (2018). Source: CARE



4.2 Day of the week and hour

Compared to all road fatalities combined, the distribution of pedestrian fatalities over the hours of the week shows even stronger peaks and troughs. During the working week, a stronger morning and evening peak is observed than for all road fatalities combined. This is probably related to the commute to work/school on foot. In the weekends, there are few pedestrian fatalities in the morning.

Figure 13. Distribution of pedestrian fatalities and all fatalities by day of the week and hour in the EU27 (2018). Source: CARE

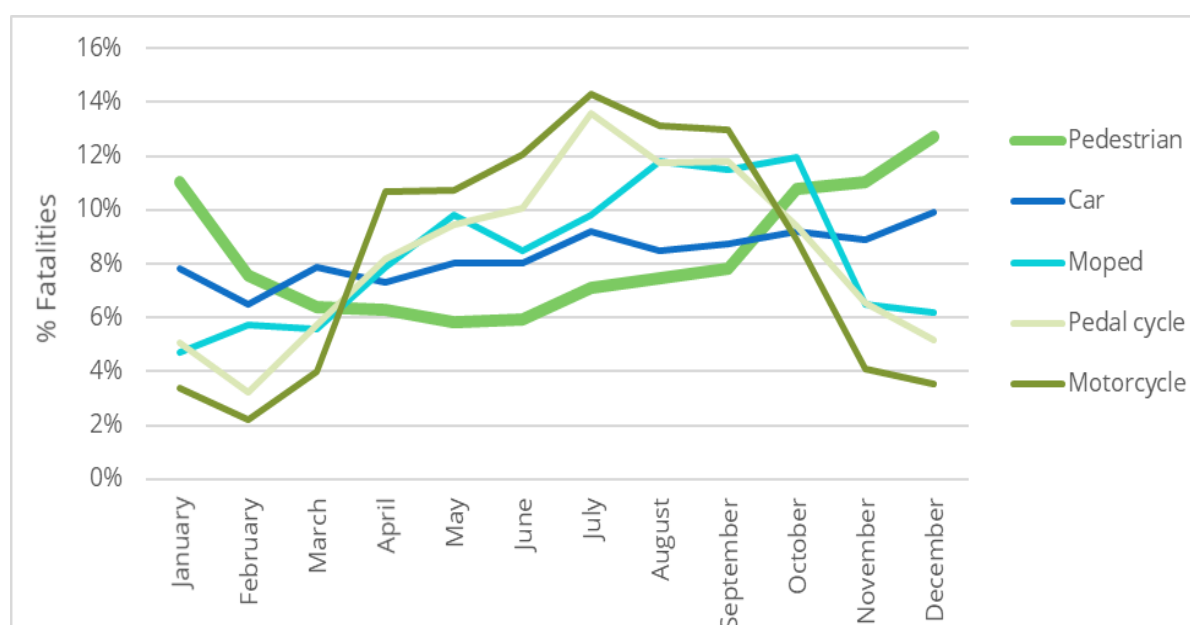


4.3 Month

The Figure below shows the distribution of road fatalities over the months of the year according to transport mode. The line for pedestrians differs markedly from the other lines: while the number of fatalities among cyclists and powered two-wheeler riders is highest during the summer months and lowest during the winter months, we see exactly the opposite pattern for pedestrian fatalities.

In the winter months up to two times more pedestrians are killed on the road than during the months of March to June. A possible explanation is that the number of trips during the winter months decreases for cyclists and powered two-wheeler riders but not in the case of pedestrians. During the winter months it is also more often dark when pedestrians are travelling. Dark lighting conditions make pedestrians less visible to other road users, resulting in more frequent and serious pedestrian crashes.

Figure 14. Monthly distribution of fatalities by transport mode, in the EU27 (2018). Source: CARE



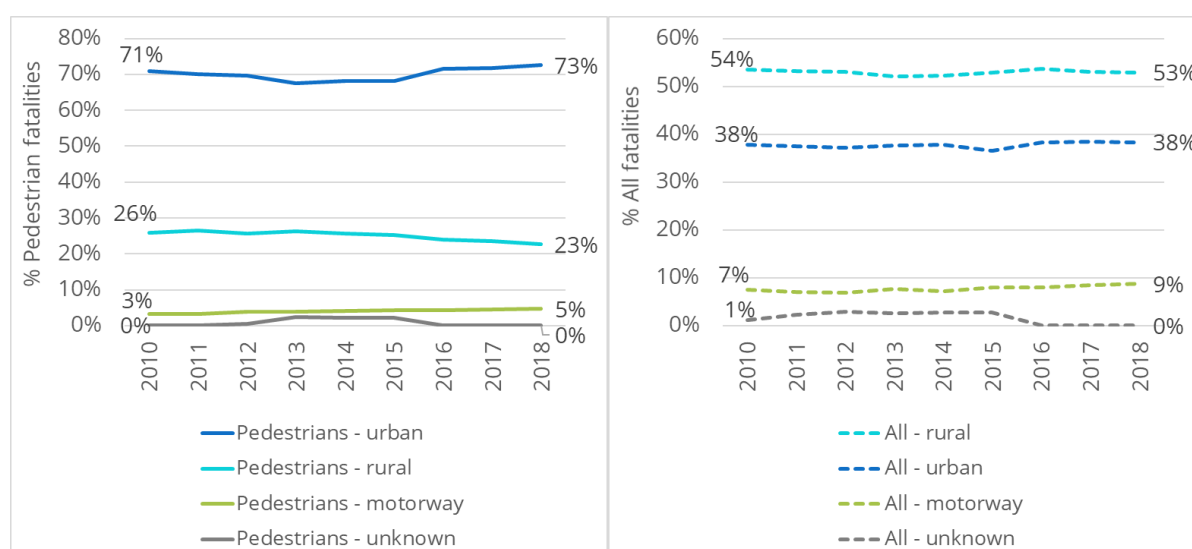
5 Location

5.1 Road type

Compared to all road fatalities combined, far more pedestrian fatalities occur on urban roads (38% versus 73%). Correspondingly, the proportion of pedestrian fatalities on rural roads is much lower (23%) compared to the proportion of all fatalities on rural roads (53%).

A remarkably high proportion of pedestrian fatalities die on motorways (5% which corresponds to 221 persons in 2018). These pedestrians include vehicle occupants who have left their vehicles on the motorway.

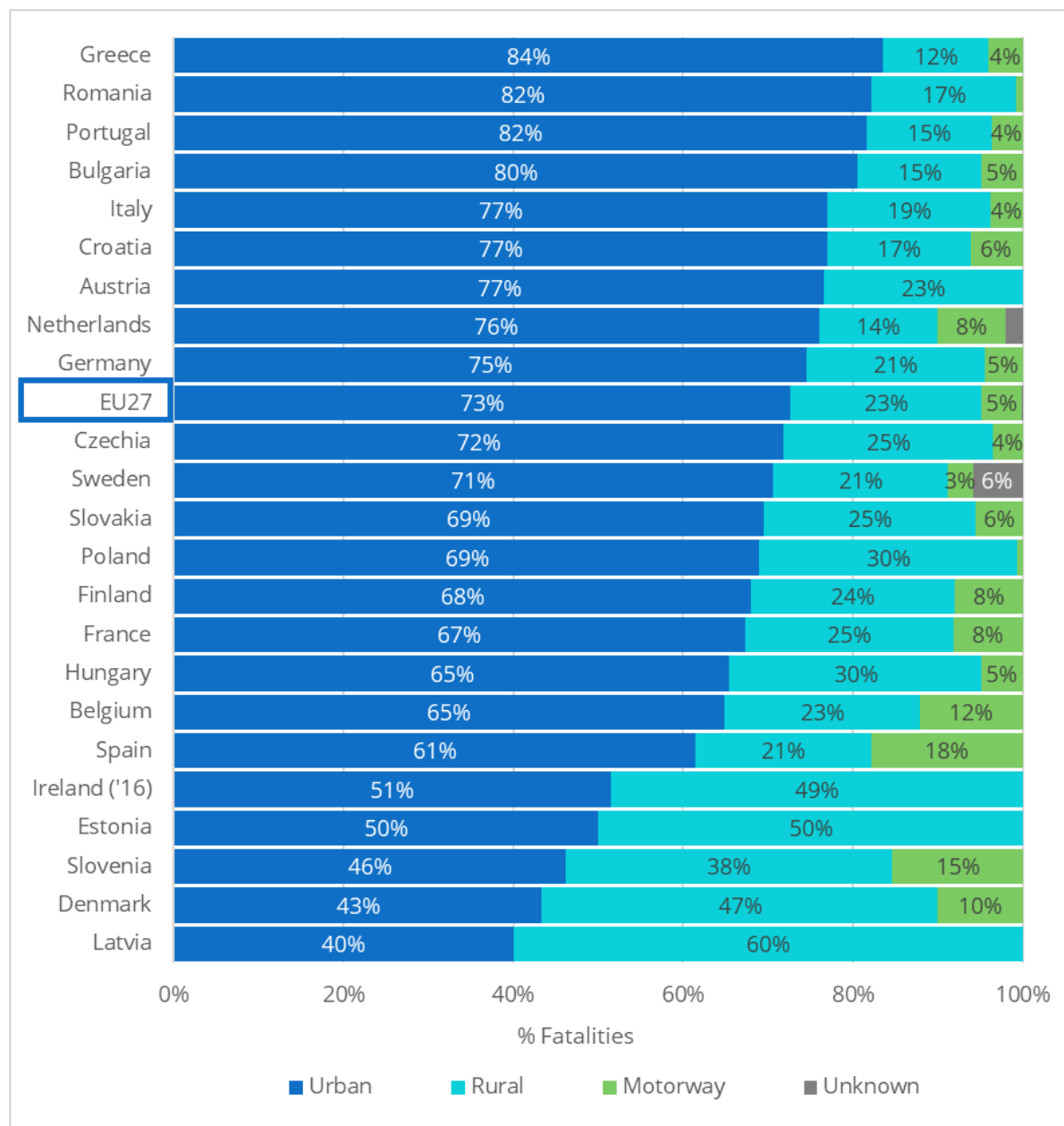
Figure 15. Distribution of pedestrian fatalities and all fatalities by road type in the EU27 (2010-2018). Source: CARE



The proportion of pedestrian fatalities on urban roads is highest in some countries in the south of the EU: Greece, Romania, Portugal, Bulgaria, Italy. Except for Romania, these are all countries with an above-average proportion of seniors among pedestrian fatalities.

Some countries with a high number / proportion of motorway fatalities in 2018 were: Spain, France, Denmark and Belgium.

Figure 16. Distribution of pedestrian fatalities by road type per country in the EU27 (2018). Source: CARE



Notes:

- Due to small numbers of fatalities, Cyprus, Malta and Luxembourg are not included.
- Lithuania is omitted from the Figure because the road type is unknown for all pedestrian fatalities.

5.2 Junction type

In relation to the proportion of fatalities according to junction type, there are only minor differences between pedestrian fatalities and all fatalities. **In 2018, 81% of pedestrians died on a road stretch**, 11% at a junction (slight decrease compared to 2010), and 1% at a roundabout.

In Slovakia and Romania, the share of pedestrian fatalities on road stretches was higher than 90% in 2018.

Figure 17. Distribution of pedestrian fatalities and all fatalities by junction type in the EU27 (2010-2018).
Source: CARE

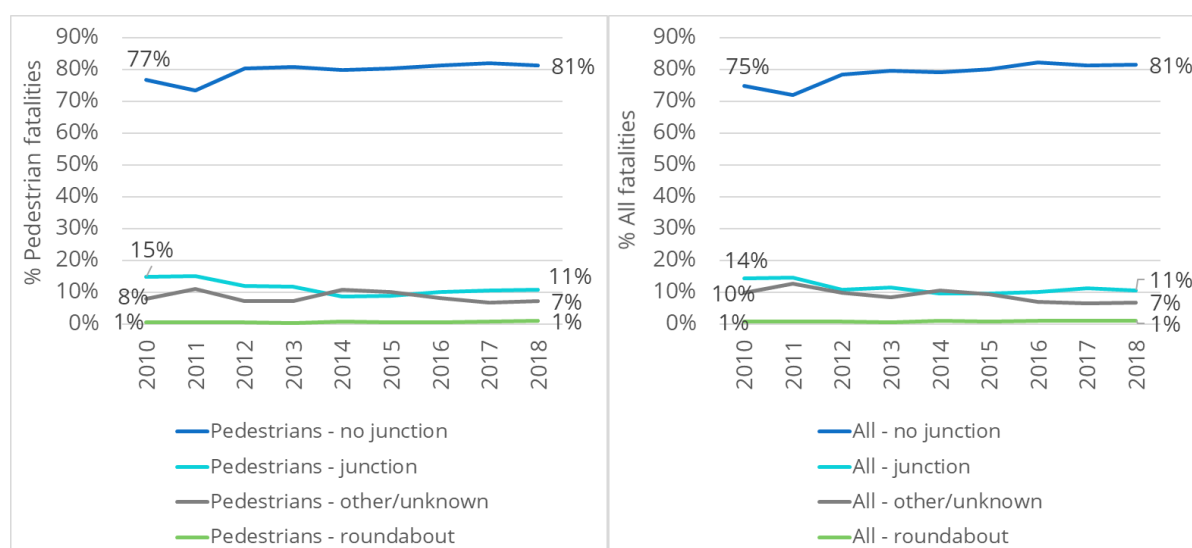
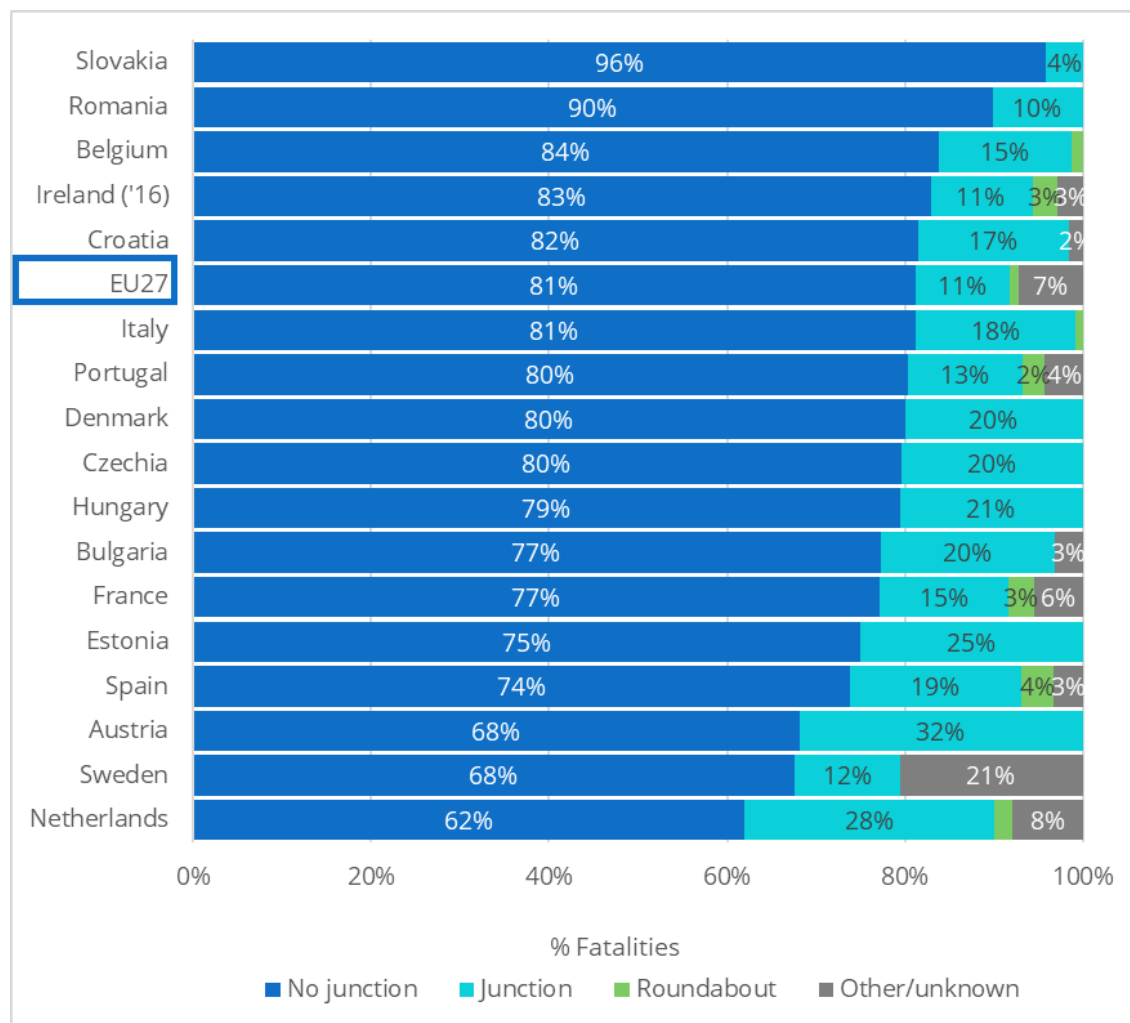


Figure 18. Distribution of pedestrian fatalities by junction type per country in the EU27 (2018). Source: CARE



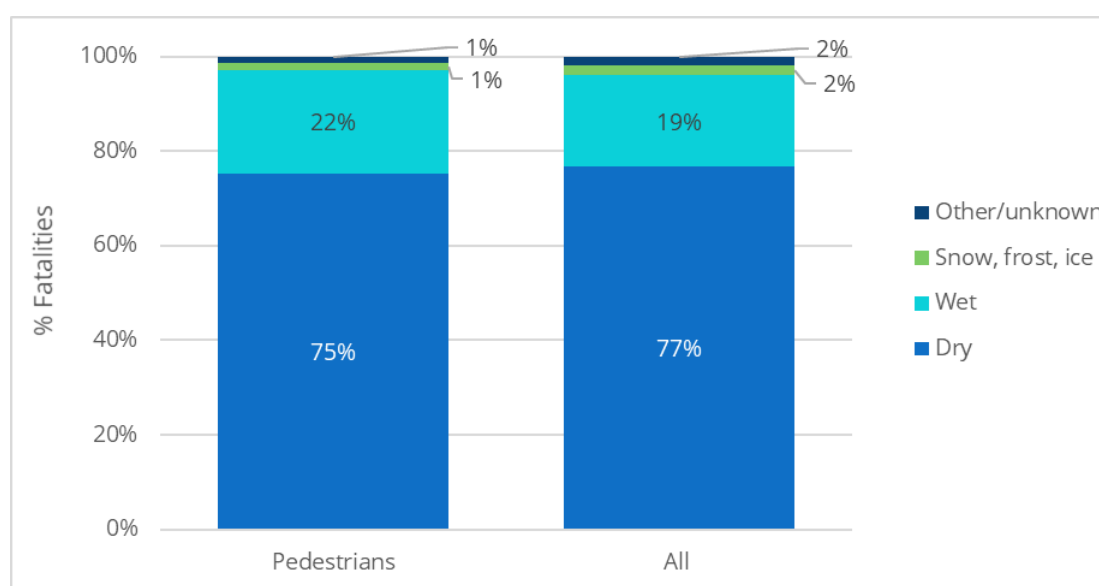
Notes:

- Due to small numbers of fatalities, Cyprus, Malta and Luxembourg are not included.
- Due to incomplete information about junction type the following countries are not included: Germany, Finland, Greece, Latvia, Lithuania, Poland, and Slovenia.

5.3 Surface

The surface conditions were dry for three quarters (75%) of pedestrian fatalities. For 22% of the fatalities the surface was wet or damp; and for only 1% of the fatalities were snow, frost, and ice reported. Given great differences in climate, it is not surprising that in EU countries in the south a dry surface is reported more often, while snow is more often reported in countries in the north. Between 8% and 20% of pedestrian fatalities in Latvia, Sweden and Finland die on a surface covered with snow, ice or frost, which may even be an underestimate given the high proportion of "other/unknown" surface conditions in these countries (see excel file "F&F Pedestrians").

Figure 19. Distribution of pedestrian fatalities and all fatalities by surface condition in the EU27 (2018).
Source: CARE



Notes

Definitions

The definitions below are taken from the CADAS Glossary and the UNECE Glossary.

CADAS Glossary: https://ec.europa.eu/transport/road_safety/sites/road-safety/files/pdf/statistics/cadas_glossary.pdf

UNECE/ITF/Eurostat Glossary: <https://www.unece.org/index.php?id=52120>

Crash (Source: UNECE/ITF/Eurostat Glossary)

Any accident involving at least one road vehicle in motion on a public road or private road to which the public has right of access, resulting in at least one injured or killed person.

Fatality (Source: CADAS Glossary)

Death within 30 days of the road accident; confirmed suicide and natural death are not included.

Victims (Source: CARE database)

Total of fatalities, seriously injured and slightly injured and injured.

Vulnerable road users

In the Facts and Figures reports vulnerable road users refer to pedestrians, cyclists, riders of mopeds and motorcyclists.

Working week – daytime

Monday to Friday 6.00 a.m. to 9.59 p.m.

Working week – night

Monday 10 p.m. to Tuesday 5.59 a.m.

Tuesday 10 p.m. to Wednesday 5.59 a.m.

Wednesday 10 p.m. to Thursday 5.59 a.m.

Thursday 10 p.m. to Friday 5.59 a.m.

Weekend – daytime

Saturday to Sunday 6.00 a.m. to 9.59 p.m.

Weekend – night

Friday 10 p.m. to Saturday 5.59 a.m.

Saturday 10 p.m. to Sunday 5.59 a.m.

Sunday 10 p.m. to Monday 5.59 a.m.

Data source

The main data source for this report is CARE (Community database on Accidents on the Roads in Europe). The database contains data obtained from national data sources, not only EU members but also from the UK and the 4 EFTA countries (Switzerland, Norway, Iceland, and Liechtenstein). The data in the report were extracted on 27 December 2020.

As the database is not complete for all countries and all years, additional data were provided by the European Commission in order to be able to calculate the general total for fatalities for the EU27.

Small cells

Absolute numbers of fatalities can be very small for small countries, which can strongly influence trend indicators and other derived indicators such as mortality. Care should be taken when interpreting these numbers. When commenting on the Figures, countries with small numbers were omitted.

Missing data

Some countries did not provide data for all years and/or all variables to the CARE database. When data are missing for specific combinations of years and countries, imputation is used to fill in the empty cells.

Imputation results for individual countries are never published in the Facts and Figures reports, but they are aggregated to generate an imputed number at EU27 level. The following imputation method for individual countries is used:

- Values missing at the end of a time series are given the last known value in the series.
- Values missing at the beginning of a time series are given the first known value in the series.
- If values are missing in the middle of a time series, linear extrapolation is used.

Figures that only contain information on the relative distribution of fatalities have not been obtained through imputation. These are mostly the Figures from section 3 onwards. The report always mentions in footnotes when imputation was used. If this is not mentioned in the footnotes, no imputation was used.

Countries included

The Figures in this report present the information for the countries that are members of the EU at the time of publication of the report. In December 2020, 27 countries were members of the European Union, excluding the UK. The EFTA countries and the UK are included in Table 1.

Liechtenstein is excluded from this report because no recent accident data containing breakdowns according to transport mode and other variables data are available for this country.

